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REMARKS

Claims 1, 4-11 and 14-25 were pending in this application, with claims 2, 3, 12 and 13 having previously been canceled without prejudice or disclaimer. By the present Amendment, claims 5 and 15 have been canceled without prejudice or disclaimer, claims 1 and 11 have been amended to clarify the claimed subject matter, and new claim 26 has been added. Claims 1, 4, 6-11, 14 and 16-26 remain pending upon entry of this Amendment, with claims 1, 11 and 26 being in independent form.

Claims 1, 4-6, 9-11, 14-16, 19, 20, 24 and 25 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol et al. (US 2004/0101086 A1) in view of Kim et al. (US 6,278,761) and further in view of Wiemker (WO 02/103065) and Kvist et al. (1988, "Total and visceral adipose-tissue volumes derived from measurements with computed tomography in adult men and women: predictive equations"). Claims 7, 8, 17 and 18 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker and Kvist and further in view of Wollenweber (US 7,155,047). Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker and Kvist and further in view of Rosania et al. (US 2003/0059093 A1). Claims 23 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker, Kvist and Wollenweber and further in view of Griffin et al. (US 2004/0207625 A1).

Applicant respectfully submits that independent claims 1 and 11 of the present application are allowable, for at least the reason that the cited art does not disclose or suggest the aspects of an approach for automatically separating a subcutaneous adipose region and a visceral adipose region in a body region, including more specifically (c) extracting an abdominal wall muscle layer region as a non-adipose region *from the body region from which the epidermal*

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tissue layer region has been removed, and (d) setting a line surrounding the abdominal wall muscle layer region based on positional information of the abdominal wall muscle layer region extracted in (c).

Such aspects are illustrated by way of example in Fig. 19 of the present application. In the approach illustrated in Fig. 19, as discussed in paragraph [0046] (of US 2006/0204063 A1), a preset region including an epidermal region is removed from the body region, and adipose region dividing processing like the processing illustrated in Figure 7 is performed. Such processing, as discussed in paragraph [0037], includes performing peripheral edge recognition processing to radially set attention points on the recognized peripheral edge, and tracing the recognized peripheral edge to extract an outline of the abdominal wall muscle layer.

Wiemker, as understood by applicant, proposes an approach for detecting intensity transitions in medical image data (such as for rendering and measurement of lung nodules), by applying a Laplace operator to the intensity values of each pixel or voxel of the image data set to obtain global or local maxima of a gradient integral function which are correlated to contrasting boundaries. Data obtained from applying such approach to abdomen CT data set is shown graphically in Fig. 2 of Wiemker, and according to Wiemker (page 8, lines 15-28), the gradient integral function $F(T)$ shows well-pronounced peaks at the transitions from air to skin, from skin to muscle and from soft-tissue to bone, and the threshold (i.e. -40HU) can be selected to visualize the skin to muscle transition.

However, it should be noted that Wiemker says nothing whatsoever regarding removing an epidermal tissue layer region from the body region, and extracting an abdominal wall muscle layer region as a non-adipose region *from the body region from which the epidermal tissue layer region has been removed*.

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Instead, Wiemker merely proposes relying on contrasting intensity values and picking an appropriate threshold for visualizing a transition between different tissue types (such as -40HU for visualizing the skin to muscle transition). However, the -40HU is NOT applied to remove, or even separate, an epidermal tissue layer region from the body region. To the contrary, the threshold is applied to view BOTH skin and muscle in the skin to muscle transition.

Further, in the approaches proposed in Sabol, as already discussed in the record at length, segmentation of a region of interest are performed manually and/or automatically *based on prior knowledge of the shape or size of the area of interest*. Such approaches of Sabol do NOT involve (c) extracting an abdominal wall muscle layer region as a non-adipose region *from the body region from which the epidermal tissue layer region has been removed*, and (d) setting a line surrounding the abdominal wall muscle layer region based on positional information of the abdominal wall muscle layer region extracted in (c).

The other cited references (including Kim, Kvist, Grauer, Wollenweber, Rosania and Griffin) have been discussed amply already in the record, and like Wiemker and Sabol, simply do NOT disclose or suggest the aforementioned aspects of independent claims 1 and 11 of the present application of (c) extracting an abdominal wall muscle layer region as a non-adipose region *from the body region from which the epidermal tissue layer region has been removed*, and (d) setting a line surrounding the abdominal wall muscle layer region based on positional information of the abdominal wall muscle layer region extracted in (c).

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does **NOT** render unpatentable said aforementioned aspects of independent claims 1 and 11 of the present application, and that therefore independent claims 1 and 11, and the claims depending therefrom, are allowable.

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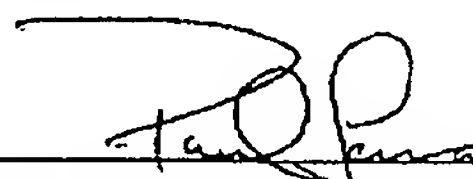
Applicant further submits that independent claim 26 is allowable since the cited art does NOT disclose or suggest extracting, based on both of the non-adipose region and the *body region from which the epidermal tissue layer region has been removed*, a total body adipose region *from the body region from which the epidermal tissue layer region has been removed*.

Accordingly, applicant earnestly solicits the allowance of the application.

However, if the Examiner can suggest an amendment that would advance this application to condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees in connection with this amendment, and to credit any overpayment, to our Deposit Account No. 03-3125.

Respectfully submitted,



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